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(b) locating a coil group insertion tool configured to insert winding coil groups into the stator core adjacent to a support assembly configured to support the stator core;

(c) inserting groups of coils into the stator core from alternating ends of the stator core by rotating the support assembly for insertion of each successive coil group so as to successively orient the first and the second end of the stator core towards the insertion tool.

21. (New) A method as set forth in claim 20, wherein the stator core is rotationally indexed between insertion of successive coil groups.

22. (New) A method as set forth in claim 20, wherein leads from each successive coil group exit the stator core via the end thereof through which it is inserted in step (c).

23. (New) A method as set forth in claim 20, wherein the coil groups are inserted into the stator core such that two winding coils of each group are singularly located in respective winding slots of the core and four winding coils of each group are located in respective winding slots shared with coils from a different group.

24. (New) A method as set forth in claim 23, wherein the coils of a first group disposed singularly in respective winding slots are disposed adjacent to coils of a second group disposed singularly in respective winding slots.

25. (New) A method as set forth in claim 20, wherein each coil group comprises six winding coils.

26. (New) A method as set forth in claim 20, wherein the coil groups include six coil groups inserted into the stator core to define a three-phase, two-pole stator assembly.

27. (New) A method for making an electric motor stator, the method comprising steps of:

(a) inserting a coil group via an insertion tool into a stator core through a first end thereof, the stator core being supported on a rotatable support structure in a first position;

(b) rotating the support structure 180 degrees to a second position;

(c) inserting a successive coil group via the insertion tool into the stator core through a second end opposite the first end; and

(d) repeating steps (a) through (c) until a desired number of coil groups have been inserted into the stator core.

28. (New) A method as set forth in claim 27, wherein the rotatable support structure has a centerline lying at a same location when the support structure is in the first and second positions.

29. (New) A method as set forth in claim 27, wherein leads from each coil group exit an end of the stator core through which the respective group is inserted.

30. (New) A method as set forth in claim 27, wherein each coil group includes six coils.

31. (New) A method as set forth in claim 27, wherein six coil groups are inserted into the stator core.

32. (New) A method as set forth in claim 31, wherein the coil groups are configured and disposed to form a three-phase, two-pole stator.

33. (New) A method as set forth in claim 27, wherein at least one coil from each group is disposed singularly in a winding slot and a plurality of coils from the same group are disposed in slots shared with coils from a different group.

34. (New) A method for making an electric motor stator, the method comprising steps of:

(a) inserting a first coil group for a first electrical phase via an insertion tool into a stator core through a first end thereof;

(b) inserting a first coil group for a second electrical phase via the insertion tool into the stator core through a second end thereof opposite the first end;

(c) inserting a first coil group for a third electrical phase via the insertion tool into the stator core through the first end thereof;

(d) inserting a second coil group for the first electrical phase via the insertion tool into the stator core through the second end thereof;

(e) inserting a second coil group for the second electrical phase via the insertion tool into the stator core through the first end thereof; and

(f) inserting a second coil group for the third electrical phase via the insertion tool into the stator core through the second end thereof.

35. (New) A method as set forth in claim 34, wherein the stator core is supported on a rotatable support structure, and wherein the support structure is rotated 180 degrees between first and second positions for each successive insertion step.

36. (New) A method as set forth in claim 35, wherein the support structure has a centerline lying at a same location when the support structure is in the first and second positions.

37. (New) A method as set forth in claim 34, wherein each coil group has leads exiting the stator core from the end through which the coil group is inserted.

38. (New) A method as set forth in claim 34, wherein each coil group includes at least one winding disposed singularly in a winding slot of the stator core and a plurality of windings disposed in winding slots shared with windings of a different coil group.

39. (New) A method as set forth in claim 38, wherein each coil group has two windings disposed singularly in respective winding slots and four windings disposed in respective winding slots shared with windings of a different coil group.

40. (New) A method as set forth in claim 34, wherein the coil groups are configured and inserted to define a three-phase, two-pole stator.

41. (New) A method for making an electric motor stator, the method comprising steps of:

(a) inserting a first coil group for a first electrical phase via an insertion tool into a stator core, leads of the first coil group exiting a first end of the stator core;

(b) inserting a second coil group for a second electrical phase via the insertion tool into the stator core, leads of the second coil group exiting a second end of the stator core opposite the first end;

(c) inserting a third coil group for a third electrical phase via the insertion tool into the stator core, leads of the third coil group exiting the first end of the stator core;

(d) inserting a fourth coil group for the first electrical phase via the insertion tool into the stator core, leads of the fourth coil group exiting the second end of the stator core;

(e) inserting a fifth coil group for the second electrical phase via the insertion tool into the stator core, leads of the fifth coil group exiting the first end of the stator core; and

(f) inserting a sixth coil group for the third electrical phase via the insertion tool, leads of the sixth coil group exiting the second end of the stator core.

42. (New) A method as set forth in claim 41, wherein the stator core is supported on a rotatable support structure, and wherein the support structure is rotated 180 degrees between first and second positions for each successive insertion step.

43. (New) A method as set forth in claim 42, wherein the support structure has a centerline lying at a same location when the support structure is in the first and second positions.

44. (New) A method as set forth in claim 41, wherein each coil group is inserted through the end of the stator core from the respective leads exit.

45. (New) A method as set forth in claim 41, wherein each coil group includes at least one winding disposed singularly in a winding slot of the stator core and a plurality of windings disposed in winding slots shared with windings of a different coil group.

46. (New) A method as set forth in claim 45, wherein each coil group has two windings disposed singularly in respective winding slots and four windings disposed in respective winding slots shared with windings of a different coil group.

47. (New) A method as set forth in claim 41, wherein the coil groups are configured and inserted to define a three-phase, two-pole stator.

48. (New) A method for making an electric motor stator, the method comprising steps of:

(a) positioning an insertion tool adjacent to a rotatable support structure, the support structure being configured to receive and support a stator core for rotation between first and second positions 180 degrees displaced with respect to one another, the rotatable support structure having a centerline lying at a same location when the support structure is in the first and second positions;

(b) placing the support structure in the first position;

(c) inserting a coil group via an insertion tool into a stator core through a first end thereof;

(d) rotating the support structure 180 degrees to the second position;

(e) inserting a successive coil group via the insertion tool into the stator core through a second end opposite the first end; and

(f) repeating steps (b) through (e) until a desired number of coil groups have been inserted into the stator core.

49. (New) A method as set forth in claim 48, comprising the step of indexing the stator core between each insertion step to position the stator core to receive a successive coil group.

50. (New) A method as set forth in claim 48, wherein leads from each coil group exit an end of the stator core through which the respective group is inserted.

51. (New) A method as set forth in claim 48, wherein each coil group includes six coils.

52. (New) A method as set forth in claim 51, wherein six coil groups are inserted into the stator core.

53. (New) A method as set forth in claim 52, wherein the coil groups are configured and disposed to form a three-phase, two-pole stator.

54. (New) A method as set forth in claim 48, wherein at least one coil from each group is disposed singularly in a winding slot and a plurality of coils from the same group are disposed in slots shared with coils from a different group.